

*Cyrtomium macrophyllum* (Makino) Tagawa (Dryopteridaceae ),  
New record for Eastern Himalaya, India

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**Abstract:**

*Cyrtomium macrophyllum* (Makino) Tagawa belonging to the family Dryopteridaceae is reported as a new record for Eastern Himalaya, a graceful, rare fern with full citations, correct nomenclature, detailed description, distribution along with illustration to facilitate easy identification

**Key words:** *Cyrtomium macrophyllum*, New record, North Eastern India, Dryopteridaceae

**1.Introduction**

*Cyrtomium* Presl. is a subtropical terrestrial genus. It is widely distributed in all continents and the Pacific Islands. About 10 species occur world wide (Padey & Padey 2003) distributed in tropical and sub tropical areas (South Africa, S.America, Hawaii, Phillipines). 5 species have been reported from India, (Chandra 2000) viz *Cyrtomium caryotideum* (Wall.) Presl, *C.falcatum* (Linn.f.)Presl, *C.hookerianum* (presl.) C.Chr. *C.macrophyllum* (makino)Tagawa and *C.nervosum* Ching and Shing; out of which only one species are known from Arunachal Pradesh (Singh and Panigrathi 2005). Pande & Pande 2003 reported *Cyrtomium macrophyllum* (Makino) Tag from western Himalayan state like Jammu Kashmir and Himachal Pradesh. But in the North Eastern India is concerned it is never reported earlier.

While collecting plant in November 2008 from Mechuka West Siang District of Arunachal Pradesh, These specimens have characteristic features of *Cyrtomium macrophyllum* (Makino) Tag. The citation, synonymy, description, specimen examined, ecology, earlier records, distribution are

provided along with the illustration. The voucher specimens are deposited in the herbarium of Botanical survey of India, Arunachal Pradesh Circle (ARUN), Itanagar. This description of this newly collected specimen from Arunachal Pradesh is furnished below.

**2.Taxonomic Account**

*Cyrtomium macrophyllum* (Mak.) Tagawa, Acta Phytotax. Geobot 3:62 (1934); in Hara, Fl. Eas. Himal. 2:209 (1971); Nakaike, Enum. Pterid.Japon. Fil.204 (1975); Ghosh, J.Econ. Tax.Bot 4(2): 481 (1983); Ching & S.K Wu in Wu Fl. Xizang, 1:201(1983); Kuo, Taiwania 30:31 (1985); Frasnjenk., Pakistan Syst.5: 97 (1991); Nakaike &Malik, Crypt. Fl. Pakistan. 2:447 (1993).

*Aspidium falcatum* var. *macrophyllum* Makino, Bot.Mag.Tokyo 16:90 (1902).

*Cyrtomium muticum* (Christ.)Ching in C. Chr.,Index Fil. Suppl. 3: 66 (1934).

*Polystichum macrophyllum* (Mak.) Tagawa, Acta Phytotax.Geobot.2:194 (1933); C.Chr.,Index. Fil. Suppl. 3: 164 (1934).

Rhizome short, erect, thick, densely scaly; scales blackish-brown, concolorous to bicolorous, linear-lanceolate or ovate, margin densely

fibrillose, tip blunt. Stipe angular, dia. 0.7 cm, base densely scaly, upwards fibrillose and sparsely scaly, scales similar to rhizome scale; rachis stiff, scaly and fibrillose. Lamina pinnate, oblong-lanceolate, thick, coriaceous, dark green, turns brownish-green during storage, pinnae 5-7 pairs; pinnae pair subopposite, petiolate, ovate, base truncate, tip acuminate, margin entire, undulating, lowermost pinna-pair the largest 13-15 x 9 cm, acroscopic auricle represented by a mere stump on lowermost pinna pair but absent in above all, basispic auricle completely absent, base round; terminal pinna auricle completely absent, base round; terminal pinna auricled on both faces; venation reticulate, mid vein prominent, reticulate veins angularly anastomosing into unequal, sub-hexagonal areolae including 1-3 clavate veinlets. Sori indusiate, scattered over veinlets; indusia orbicular, peltate, margin entire to fimbriate; sporangia globose, annulus cells 14-16. Spores dark brown, perinate, perine papillose,  $40.2\mu \times 50-56\mu$ . (Fig 1. A-G)

### 3. Specimen examined

Recorded from near by the hanging bridge, Mechuka forest Area, West Siang District, A.P specimens, lodged at BSI, APC, Itanagar (BSI 22090)

### 4. Ecology

Rare, terrestrial, on moist, shady forest floor near the streamlets, 1600-1750m.

### 5. Distribution in India

North Western Himalaya – Jammu: Kathua, Doda; Himachal Pradesh: Champa

### 6. General Distribution

Bhutan, China, Japan, Nepal, Pakistan, Taiwan, Tibet.

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